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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,313	04/13/2005	Takeshi Yuuki	270312US0PCT	9109
22850	7590	07/02/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER GARDNER, SHANNON M	
			ART UNIT	PAPER NUMBER
			1795	
			NOTIFICATION DATE	DELIVERY MODE
			07/02/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,313	<b>Applicant(s)</b> YUUKI ET AL.	
	<b>Examiner</b> SHANNON GARDNER	<b>Art Unit</b> 4132	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-42 is/are pending in the application.
- 4a) Of the above claim(s) 31-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/13/2005</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I (claims 21-30) in the reply filed on 5/5/2008 is acknowledged. The traversal is on the ground(s) that the Examiner did not consider the contribution of the invention as a whole, over the prior art. Also, that the Examiner did not consider the content of the claims, as interpreted in view of the description, in asserting a lack of unity. This is not found persuasive because the only common technical feature present between the two instant independent claims (claims 21 and 31) is a process of producing a solar battery module comprising solar battery cells sealed by a resin between a transparent panel of a light reception surface side and back face panel. However, this cannot be deemed a special technical feature under PCT Rule 13.2 because the element is shown in the prior art, as cited in the previous action.

With respect to a group of inventions claimed in an international application, unity of invention exists only when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding special technical features (see 37 CFR 1.475, sections I and II).

The requirement is still deemed proper and is therefore made FINAL.

***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent PCT/JP03/13358, filed on 10/20/2003.

***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

Art Unit: 4132

2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 21-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kataoka (JP 09-036405, cited in IDS, machine translation provided) in view of Fujisaki (JP 61-166182, cited in IDS).

As to claim 1, Kataoka is directed to a process of producing a solar battery module (400) comprising (see Drawing 4 and paragraphs [0011]-[0014]):

- Plural solar battery cells (401) sealed by a resin (402) between a transparent panel of the light reception surface side (403) and a back face panel (406), comprising:
  - Arranging plural solar battery cells at a prescribed interval and mutually connecting them to each other by a conductor (see interconnects between cells in Drawing 4)
  - Arranging a first sealing resin sheet (402 – top) substantially covering the entire surface of the transparent panel of the light reception surface side between the transparent panel of the light reception surface side (403) and the solar battery cells (401);
  - Arranging a second sealing resin sheet (402 – bottom) substantially covering the entire surface of the back face panel (406) between the back face panel and the solar battery cells (401)
  - Discharging air between the transparent panel of the light reception side and the back face panel (paragraph [0014]); and

- Heating the resin for melting and then cooling it down for sealing (paragraph [0014]).

Kataoka is silent as to arranging sealing resin sheet pieces having a thickness thicker than that of the solar battery cells at a space between the solar cells so as to be sandwiched by the first sealing resin sheet and the second sealing resin sheet.

However, it is known in the photovoltaic art to utilize spacers (4) in the intervals between solar cells in a resin-laminated (2) photovoltaic module (Figure) at a space between the solar cells so as to be sandwiched by the first and second resin sheets (2) in order to prevent the superposition of adjacent elements during sealing of the resin, as taught by Fujisaki (see Figure and abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the spacers taught by Fujisaki in the device taught by Kataoka in order to prevent the superposition of adjacent elements during sealing. It is the Examiner's position that the spacers taught by Fujisaki (made of silicone rubber) read on the instant claim of a resin.

Regarding claims 22-25, where the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device, the claimed device is not patentably distinct from the prior art device (*Gardner v. TEC Systems, Inc.* 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), also see MPEP § 2144.01 section II). Therefore, having the thickness of the sealing resin sheet pieces being thicker than the sum total value of the thickness of the solar battery cells and the thickness of the conductor as well as having the width of

Art Unit: 4132

the sealing resin sheet pieces being narrower than the width of the space between solar cells would have been within purview of one of ordinary skill in the art at the time of the invention with only routine experimentation in order to accommodate solar cells of varying sizes.

Regarding claim 26, Kataoka teaches a space between the sealing resin sheet pieces, and the internal air being discharged therethrough (paragraphs [0011] and [0014]).

Regarding claim 27, Kataoka teaches the sealing resin sheets being made of at least one resin selected from ethylene-vinyl acetate copolymer and polyvinyl butyral (see paragraphs [0013] and [0028]).

Regarding claim 28, Kataoka teaches the sealing resin sheeting being made of a crosslinkable thermoplastic resin (paragraph [0005]); and in sealing in a sealing treatment vessel (Drawing 7), the sealing operating including respective steps of a step of reducing the pressure in the sealing treatment vessel ("exhaust top and bottom room") at a temperature which the thermoplastic resin is not melted, a step of raising the temperature ("heat with a heater") to the vicinity of or higher than the melting point of the thermoplastic resin ("...sealing agent resin fuses", if the resin is able to fuse it must be melting) in the reduced-pressure state, a step of raising the pressure in the sealing treatment vessel ("return to atmospheric"), a step of raising the temperature to a temperature range where a crosslinking reaction proceeds ("EVA heats to the temperature which causes crosslinking"), thereby proceeding with the crosslinking

reaction, and a step of performing cooling is carried out (“take out module *after cooling*”).

Regarding claim 29, Kataoka teaches the transparent plane of the light reception surface side being made of tempered glass (paragraph [0039]).

Regarding claim 30, it is the Examiner's position that Kataoka's rear face member (505, aluminum coated TEDORA film) is semi-transparent (see paragraph [0060]) and therefore the solar battery module produced will function as a daylighting type solar battery module.

#### ***Contact/Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANNON GARDNER whose telephone number is (571)270-5270. The examiner can normally be reached on Monday to Thursday, 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica Ward can be reached on 571.272.1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. G./  
Examiner, Art Unit 4132

/Jessica L. Ward/  
Supervisory Patent Examiner, Art Unit 4132